

TWO NEW SUBSPECIES OF PHLEBODES TIBERIUS MOESCHLER

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Phlebodes tiberius Moeschler is widely distributed from Mexico through Central America, South America to southern Brazil and in Trinidad, British West Indies, and is subject to considerable variation in the maculation, color shade of the maculation and in the color of the under side of the wings.

Some of the variations widely differ from the nymotypical form and appear to have become stabilized in certain localities and where this has occurred they have attained a subspecific status. Two of these extreme forms, which so widely differ from typical *tiberius* as to be taken for other species, are described here and the general characters of the maculation of *tiberius* Moeschler and the form *reticulata* Ploetz are given for the purposes of comparison with the newly described subspecies of *tiberius*.

In view of the uncertainty of the identity of Cramer's *pertinax*, the type of the genus *Plebodes*, it may be that *tiberius* and several other allied species are not congeneric with *pertinax*.

Phlebodes tiberius Moeschler

1882. *Apaustus tiberius* Moeschler, Verhandlungen der kaiserlich-koeniglichen zoologisches-botanischen Gesellschaft in Wien, xxxiii, p. 329, Surinam "Innern."
1900. *Phlebodes tiberius* Godman, Biologia Centrali-Americana, Rhopal., ii, p. 553; iii, pl. 99, figs. 40-43.
1924. *Phlebodes tiberius* Draudt, in Seitz Macrolepidoptera of the World, v, p. 966, pl. 187a.

Moeschler's description, based on a single male, is detailed and clear and it is not difficult to find specimens which agree or very closely agree with it. Godman's figures are excellent but those of Draudt do not represent the typical form.

On the upper side of *tiberius* males there is a discal band on the primaries composed of four yellow spots, one each in inter-

spaces 1 to 4, the upper one very small, and there are three subapical spots of the same color, the upper one smaller than the others. Occasional individuals lack the small spot in interspace 4 and the upper subapical spot. The upper side of the secondaries is unmarked.

On the under side there is no spot of the discal band in interspace 1 of the primaries. On this side the ground color of the secondaries is brownish, the veins are yellowish and there is a discal band of yellowish spots.

On the upper side of *tiberius* females the spot of the discal band in interspace 1 of the primaries is yellowish, those above are whitish or a little tinged with yellow. The secondaries above show dim traces of a discal band of small yellowish spots.

The under side of the primaries is brown and there is a purplish sheen in the apical area, the subapical spots and those of the discal band in interspaces 2 and 3 are repeated and in addition there is a small spot in interspace 4 and another in 5, the spot in interspace 1 is absent or dimly visible. The secondaries are brown with a purplish sheen, the veins are paler and there is a discal band of pale spots.

In the collections of The American Museum of Natural History and the Academy of Natural Sciences of Philadelphia there are specimens of *tiberius* agreeing or closely agreeing with Moeschler's description, from La Ceiba and Lancetilla, Tela, Honduras; Canal Zone, Panama; Sint Barbara Pln., Surinam River, Surinam; Putumayo River, Peru; Santarem, Brazil; Sapucay, Paraguay.

***Phlebodes tiberius* form *reticulata* Ploetz**

1883. *Hesperia reticulata* Ploetz, Stettin Entomologische Zeitung, xlv, p. 208. Laguaryra; Chiriqui.
1891. *Pamphila meton* Mabille, Annales de la Societe Entomologique de Belgique, xxxv, Comptes-Rendus des Seances, p. clxxiv. Teffe.
1891. *Pamphila suffenas* Mabille, Annales de la Societe Entomologique de Belgique, xxxv, Comptes-Rendus des Seances, p. clxxv. Porto Cabello.
1907. Godman, Annals and Magazine of Natural History, (7) xx, p. 145.

1924. *Phlebodes reticulata* Draudt, in Seitz Macrolepidoptera of the World, v. p. 966; pl. 187a.

The description by Ploetz covers quite a little variation in maculation and Godman says that the four figures in the unpublished drawings of Ploetz seem to represent more than one species. Draudt's figures of the male and female are perhaps taken from the Ploetz drawings and those of the male are taken to represent the type of *reticulata*; the figures of the female are unlike any of the specimens of that sex of *reticulata* before the writer. The figure of the upper side of the male is too highly colored green in the basal area of the wings, which may possibly be due to a little inaccuracy in the reproduction of the plate.

Godman says *meton* and *suffenas* Mabille are the same as *reticulata* and this seems to be borne out by Mabille's descriptions.

On the upper side of the primaries of the male there are small but well-defined spots of the discal band in interspaces 4 and 5. On the secondaries there is a discal band of yellow spots varying from small, rather indistinct, ones of approximately equal size to a well-defined band in which the spot opposite the end of the cell is elongated, extending inwardly into the cell, as shown in the Draudt figure of the upper side of the male. On the under side of the primaries of the typical form there is usually at least a trace of a small spot of the discal band in interspace 1. On the under side of the secondaries the basal area of the wings is yellow or yellowish, sometimes with a brownish suffusion and this area is separated from the discal band of yellow spots by a narrow band of brown spots, variably developed. There is a more or less well defined, broad outer marginal border of brown, variable in the shade of that color.

The less heavily maculated individuals appear to predominate in the island of Trinidad, British West Indies, and they also occur in Venezuela. This form seems to be the *suffenas* of Mabille as it well agrees with the description.

There are at hand specimens of the typical form from Caripito, Monagas, Venezuela; St. Laurent, French Guiana; Putumayo River, Peru.

The form of the male genitalia does not differ from that of typical *tiberius*.

The females differ but little from those of *tiberius*, the maculation of the upper side of the primaries being a little more prominent and the spots of the discal band in interspaces 4 and 5, while small, are well developed. On the under side of both wings the maculation is more developed.

***Phlebodes tiberius* race *conspicuus* new subspecies**

MALE. On the upper side of the primaries *conspicuus* differs from *reticulata* in having the three lower spots of the discal band very much larger in size, while the two upper spots, in interspaces 4 and 5, are either very small or entirely lacking. The three subapical spots elongate and prominent. On the secondaries the spots of the discal band are more extended than in *reticulata* and form a broad, irregular discal patch, cut into spots by the veins.

On the under side of the primaries the apical area is more or less suffused with rusty brownish and at the apex there is a yellow spot, followed immediately below by another smaller one and these are continued downward by a thin yellow marginal line, sometimes a little hazy. The subapical spots and discal band are repeated and the two spots in interspaces 4 and 5 are prominent in all cases whether or not they are present on the upper side. Interspace 1 is usually without a spot but sometimes a very small, hazy one is present.

On the under side of the secondaries the outer marginal band is narrower than in *reticulata* and rusty brown in color and indented opposite the cell, the rest of the wings is a pale yellowish or creamy white with from six to seven small, rusty brown spots in the basal half. The discal band is obliterated by the pale creamy color of the inner area of the wings. The abdominal fold is brownish and the inner margin is the same color as the discal area.

The females more nearly resemble the males in general appearance than in *reticulata*. On the upper side the discal band of the primaries and the subapical spots are more nearly whitish than in the males but there is a slight yellowish tinge around the edges of the discal spots and in the upper subapical spot. There are no spots of the discal band in interspaces 4 and 5. The secondaries have a prominent discal band of yellow spots, the spot opposite the cell sometimes elongated to the end of the cell.

On the under side the spots in interspaces 4 and 5 of the discal band are dimly indicated. The appearance of both wings is very similar to that of the male.

The form of the male genitalia is the same as that of *tiberius*.

Expanse: male, 34 mm.; female, 36 mm.

Type material. Holotype male, one male paratype, Massaran-duba-Blumenau, Santa Catharina, Brasil; two male paratypes, Blumenau, Santa Catharina, Brasil, in collection of The American Museum of Natural History. Allotype female; two male

and one female paratypes, all Santa Catharina, Brasil, in collection of the Academy of Natural Sciences of Philadelphia.

This race of *tiberius* appears to be confined to the region about Massaranduba-Blumenau, Santa Catharina, Brasil.

Phlebodes tiberius race obscurus new subspecies

MALE. On the upper side *obscurus* differs from typical *tiberius* in the smaller size of the spots of the discal band of the primaries and in their deeper orange fulvous color. The subapical spots are also small and orange fulvous. In one specimen the discal band has a spot in interspace 4 and in the other specimen there is a spot in each of interspaces 4 and 5, in both cases the spots are very minute. These small, darker spots do not stand out in the sharp contrast shown in typical *tiberius* and the wings present a rather diffuse appearance. The secondaries have no trace of a discal band.

On the under side of the primaries the subapical spots and the discal band are repeated except the spot in interspace 1 in one specimen and there is just a trace of it in the other specimen. The apical area is reddish brown. On the secondaries the broad outer marginal band and the abdominal fold are reddish brown, the rest of the wings to the base are yellowish suffused with reddish brown. The veins are not paler and there is no distinct discal band of pale spots.

FEMALES. On the upper side of the primaries there is a discal band of three minute orange fulvous spots, in interspaces 1, 2, and 3. One specimen has a very minute subapical spot of the same color, the other two specimens are without subapical spots. The secondaries are unmarked.

On the under side there is a very blurred appearance to both wings. The apical area is reddish brown, the upper two spots of the discal band and three subapical spots are very dimly present. The secondaries vary from brown to reddish brown, the basal area a little paler with a slight purplish reflection and there is a discal band of small, slightly paler spots. The veins are not paler.

The form of the male genitalia is the same as that of *tiberius*.

Expanse: male, 31 mm.; female, 30 mm.

Type material. Holotype male, allotype female, one male and two female paratypes, El Volcan, Chiriqui, Panama, 4,000 feet, February 20, 22, 24, 25, March 6, 1936 (W. J. Gertsch), in collection of The American Museum of Natural History.

Obscurus seems to be a race of the higher altitudes and perhaps may be confined to this region.